From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing: 15 February 2001 (15.02.01)	
International application No.: PCT/GB00/02856	Applicant's or agent's file reference: NOO/0403/PCT
International filing date: 24 July 2000 (24.07.00)	Priority date: 10 August 1999 (10.08.99)
Applicant: WHITE, Peter, McDuffie	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International preliminary Examining Authority on:

21 December 2000 (21.12.00)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer:

J. Zahra

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
N00/0403/PCT		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/GB 00/ 02856	24/07/2000	10/08/1999
Applicant		
WHITE, Peter McDuffie		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language,** the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   [ ] the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

   [ ] contained in the international application in written form.

   [ ] filed together with the international application in computer readable form.

   [ ] furnished subsequently to this Authority in written form.

   [ ] furnished subsequently to this Authority in computer readble form.

   [ ] the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   [ ] the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. [ ] **Certain claims were found unsearchable** (See Box I).

3. [ ] **Unity of invention is lacking** (see Box II).

4. With regard to the **title,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established by this Authority to read as follows:

5. With regard to the **abstract,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. 1

   [ ] as suggested by the applicant.

   [ ] because the applicant failed to suggest a figure.

   [X] because this figure better characterizes the invention.

   [ ] None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 00/02856

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N7/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KOMATSU T ET AL: "41.2: MULTISCREEN DISPLAY METHOD FOR EXPANDING STEREOSCOPIC VIEWINGSPACE" SID INTERNATIONAL SYMPOSIUM - DIGEST OF TECHNICAL PAPERS,US,PLAYA DEL REY, SID, vol. 24, 16 May 1993 (1993-05-16), pages 905-908, XP000470783 ISSN: 0097-966X the whole document ---	1-3, 11-18, 20-22, 26-33, 36,37
Y	"EYE-TO-EYE CONTACT FOR DESK-TO-DESK VIDEO CONFERENCING" IBM TECHNICAL DISCLOSURE BULLETIN,US,IBM CORP. NEW YORK, vol. 35, no. 2, 1 July 1992 (1992-07-01), pages 316-318, XP000313313 ISSN: 0018-8689 the whole document ---	1-3, 11-18, 20-22, 26-33, 36,37

-/--

[X] Further documents are listed in the continuation of box C. [ ] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 November 2000	27/11/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Van der Zaal, R

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 00/02856

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	SILVA DE C ET AL: "A MULTIPLE PERSON EYE CONTACT (MPEC) TELECONFERENCING SYSTEM" PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING. (ICIP),US,LOS ALAMITOS, IEEE COMP. SOC. PRESS, 23 October 1995 (1995-10-23), pages 607-610, XP000624042 tokyo,jp ISBN: 0-7803-3122-2 the whole document	1-37

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

PATENT COOPERATION TREATY

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
COLLINGWOOD, Anthony R.
MCNEIGHT & LAWRENCE
Regent House
Heaton Lane
Stockport
Cheshire SK4 1BS
GRANDE BRETAGNE

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing *(day/month/year)*	31.07.2001
Applicant's or agent's file reference: NOO/0403/PCT	**REPLY DUE** **within 2 month(s)** from the above date of mailing

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/GB00/02856	24/07/2000	10/08/1999

International Patent Classification (IPC) or both national classification and IPC
H04N7/14

Applicant
WHITE, Peter McDuffie

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

I	☒	Basis of the opinion
II	☐	Priority
III	☒	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	☐	Lack of unity of invention
V	☒	Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI	☐	Certain document cited
VII	☒	Certain defects in the international application
VIII	☒	Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 10/12/2001.

Name and mailing address of the international preliminary examining authority:
European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer / Examiner
Berst, C

Formalities officer (incl. extension of time limits)
Schalinatus, D
Telephone No. +49 89 2399 8242

Form PCT/IPEA/408 (cover sheet) (January 1994)

I. Basis of the opinion

1. With regard to the **elements** of the international application (Replacement *sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, pages:

1-23 as originally filed

Claims, No.:

1-37 as originally filed

Drawings, sheets:

1/10-10/10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

☐ the entire international application,

☒ claims Nos. 37,

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 37 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A written opinion cannot be drawn due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	
Inventive step (IS)	Claims	1-36

Industrial applicability (IA) Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

III). Non establishment of an opinion for a part of the demand:

The subject-matter of independent claim 37 is totally unclear and ambiguous. Claim 37 does not clearly define the subject-matter for which protection is sought. It refers to the disclosure of the demand in general, and does not clearly indicate which features disclosed therein are supposed to define the apparatus, method or product for which protection is meant to be sought.
For this reason, claim 37 could not be examined.

V). Reasoned statement under Rule 66.2 (a)(ii) PCT:

The following documents mentioned in the international search report are referred to in this written opinion; the numbering will be adhered to in the rest of the procedure:

(D1) : "EYE-TO-EYE CONTACT FOR DESK-TO-DESK VIDEO CONFERENCING" IBM TECHNICAL DISCLOSURE BULLETIN,US,IBM CORP. NEW YORK, vol. 35, no. 2, 1 July 1992 (1992-07-01), pages 316-318, XP000313313 ISSN: 0018-8689

(D2) : KOMATSU T ET AL: "41.2: MULTISCREEN DISPLAY METHOD FOR EXPANDING STEREOSCOPIC VIEWINGSPACE" SID INTERNATIONAL SYMPOSIUM - DIGEST OF TECHNICAL PAPERS,US,PLAYA DEL REY, SID, vol. 24, 16 May 1993 (1993-05-16), pages 905-908, XP000470783 ISSN: 0097-966X

(D3) : SILVA DE C ET AL: "A MULTIPLE PERSON EYE CONTACT (MPEC) TELECONFERENCING SYSTEM" PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING. (ICIP),US,LOS ALAMITOS, IEEE COMP. SOC. PRESS, 23 October 1995 (1995-10-23), pages 607-610, XP000624042 tokyo,jp ISBN: 0-7803-3122-2

1). D1, in particular page 317, first complete paragraph, page 317, four last lines and page 318, first line and figure 1 thereof, discloses:

a communications system for linking participants at two separate locations, comprising: first and second locations each provided with at least one real time

image capturing device (5), at least one image projecting device (2, 7), an observation zone for occupation by a participant (4) at that location and a two-way mirror (3) through which images are viewed, the image capturing device at each location being:

(a) arranged to view any participant occupying the home location observation zone directly or indirectly along a line of sight which passes through the two-way mirror (3: see figure 1)), and

(b) linked to the image projecting device at the other location whereby the captured image is transmitted from the home location to the remote location and projected at the remote location for viewing through the corresponding two-way mirror (3: see figure 1).

It is to be noted that all these features are also known from D3.

The difference between the subject-matter of claim 1 of the present demand and the disclosure of D1 or D3 is that, in claim 1, at least one of the locations is provided with:
"visual depth-cue means visible through the two-way mirror from the observation zone so that the remotely derived image of a remote participant is seen through the two-way mirror in superimposed relation within a three-dimensional setting afforded by said visual depth-cue means".

This feature allows to give a depth or 3D impression to the viewer on this one location and thus improves the feeling of the presence of the remote participant of the other location to this viewer.

However, the use of stereoscopic displays is known in the field of teleconference systems, in particular from D2: see page 906, section "Structure of the prototype" and first sentence of the section "Image separation method". In D2, a half-transparent mirror (or two-way mirror) is used to superimpose two images, a front image and a rear image, resulting in a visual depth effect. In this manner, a stereoscopic foreground virtual image of the remote participant is superimposed on a stereoscopic background image.

A skilled person wanting to obtain a depth impression in a teleconference system as disclosed in D1 and knowing the stereoscopic teleconference system of D2, would immediately realise that the image superimposition principle of D2 should be applied to the system of D1, and would automatically arrive in this manner at the subject-matter of claim 1 on file.

The same remark can be made with respect to the subject-matter of independent apparatus claims 30 and 36, all the features of which are respectively included in claim 1.

For these reasons, independent apparatus claims 1, 30 & 36 lack inventive step in the sense of Article 33(3) of the PCT vis-à-vis the teachings of D1 (or D3) and D2.

2). The additional features of dependent claims 2 - 29 and 31- 35 are all either known from D1 or D2 or lie within the common knowledge of a person skilled in the field of teleconferences. They do therefore not add anything inventive (Article 33(3) PCT) to the subject-matter of the claims to which these dependent claims refer.

VII). Certain defects:

a) In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the Applicant is requested to clearly indicate in the accompanying letter of reply the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion. Furthermore, for **any** subject-matter newly introduced in an amended claim, the Applicant is requested to clearly identify the source passages in the application documents as originally filed on which these amendments are based (see also Rule 66.8(a) PCT) in said letter of reply.

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

b) In order to meet the requirements of Rule 5.1(a)(ii) PCT, the documents D1, D2 & D3 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.

c) The description, in particular pages 2 and 3, must be brought into conformity with the new claims to be filed as required by Rule 5.1(a)(iii) PCT. Care should be taken during revision, especially of the introductory portion including any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed, Article 34 (2)(b) PCT.

d) The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with **all** those features known in combination from the prior art (see document D1) being placed in a preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in a characterising part (Rule 6.3(b)(ii) PCT). The independent claim should therefore be redrafted accordingly.

e) Reference signs in parentheses should be inserted in **all** the claims to increase their intelligibility, Rule 6.2(b) PCT. This applies to both the preamble and characterising portion.

VIII). Certain observations - Clarity:

1). Claim 37 is totally unclear (Article 6 PCT): see section III herein above.

2). Although claims 1, 30 & 36 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult to clearly determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

Hence, claims 1, 30 & 36 do not meet the requirements of Article 6 PCT.

In order to overcome this objection, it would appear appropriate to file an amended set of claims defining the relevant subject-matter in terms of **a single** independent apparatus claim followed by dependent claims covering features which are merely optional (Rule 6.4 PCT).

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

COLLINGWOOD, Anthony R.
MCNEIGHT & LAWRENCE
Regent House
Heaton Lane
Stockport
Cheshire SK4 1BS
GRANDE BRETAGNE

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing *(day/month/year)*	17.10.2001
Applicant's or agent's file reference: NOO/0403/PCT	**IMPORTANT NOTIFICATION**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/GB00/02856	24/07/2000	10/08/1999

Applicant
WHITE, Peter McDuffie

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/	Authorized officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Schalinatus, D Tel.+49 89 2399-8242

Form PCT/IPEA/416 (July 1992)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
NOO/0403/PCT		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/GB00/02856	24/07/2000	10/08/1999
International Patent Classification (IPC) or national classification and IPC H04N7/14		
Applicant WHITE, Peter McDuffie		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 10 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☒ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
21/12/2000	17.10.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Berst, C Telephone No. +49 89 2399 8028

Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/02856

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:
Description, pages:

1-23	as originally filed

Claims, No.:

1-43	as received on	22/09/2001	with letter of	18/09/2001

Drawings, sheets:

1/10-10/10	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   - ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
   - ☐ the language of publication of the international application (under Rule 48.3(b)).
   - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   - ☐ contained in the international application in written form.
   - ☐ filed together with the international application in computer readable form.
   - ☐ furnished subsequently to this Authority in written form.
   - ☐ furnished subsequently to this Authority in computer readable form.
   - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   - ☐ the description, pages:
   - ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-43
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-35
	No:	Claims	36-43
Industrial applicability (IA)	Yes:	Claims	1-43
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

V). Reasoned statement under Article 35 (2) PCT:

The following documents mentioned in the international search report are referred to in this report; the numbering will be adhered to in the rest of the procedure:

(D1) : "EYE-TO-EYE CONTACT FOR DESK-TO-DESK VIDEO CONFERENCING" IBM TECHNICAL DISCLOSURE BULLETIN,US,IBM CORP. NEW YORK, vol. 35, no. 2, 1 July 1992 (1992-07-01), pages 316-318, XP000313313 ISSN: 0018-8689

(D2) : KOMATSU T ET AL: "41.2: MULTISCREEN DISPLAY METHOD FOR EXPANDING STEREOSCOPIC VIEWINGSPACE" SID INTERNATIONAL SYMPOSIUM - DIGEST OF TECHNICAL PAPERS,US,PLAYA DEL REY, SID, vol. 24, 16 May 1993 (1993-05-16), pages 905-908, XP000470783 ISSN: 0097-966X

(D3) : SILVA DE C ET AL: "A MULTIPLE PERSON EYE CONTACT (MPEC) TELECONFERENCING SYSTEM" PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING. (ICIP),US,LOS ALAMITOS, IEEE COMP. SOC. PRESS, 23 October 1995 (1995-10-23), pages 607-610, XP000624042 tokyo,jp ISBN: 0-7803-3122-2

1.a). D1, in particular page 317, first complete paragraph, page 317, four last lines and page 318, first line and figure 1 thereof, discloses:

a communications system for linking participants at two separate locations, comprising: first and second locations each provided with at least one real time image capturing device (5), at least one image projecting device (2, 7), an observation zone for occupation by a participant (4) at that location and a two-way mirror (3) through which images are viewed, the image capturing device at each location being:

(a) arranged to view any participant occupying the home location observation zone directly or indirectly along a line of sight which passes through the two-way mirror (3: see figure 1)), and

(b) linked to the image projecting device at the other location whereby the captured image is transmitted from the home location to the remote location and projected at the remote location for viewing through the corresponding two-way mirror (3: see figure 1).

It is to be noted that all these features are also known from D3.

1.b). The first difference between the subject-matter of claim 40 of the present demand and the disclosure of D1 or D3 is that, in claim 40, at least one of the locations is provided with:
"visual depth-cue means visible through the two-way mirror from the observation zone so that the remotely derived image of a remote participant is seen through the two-way mirror in superimposed relation within a three-dimensional setting afforded by said visual depth-cue means".
This feature allows to give a depth or 3D impression to the viewer on this one location and thus improves the feeling of the presence of the remote participant of the other location to this viewer.

The second difference is the use of a projector to project the image on a retroreflective screen as image projecting device.

However, as to the first difference, the use of stereoscopic displays is known in the field of teleconference systems, in particular from D2: see page 906, section "Structure of the prototype" and first sentence of the section "Image separation method". In D2, a half-transparent mirror (or two-way mirror) is used to superimpose two images, a front image and a rear image, resulting in a visual depth effect. In this manner, a stereoscopic foreground virtual image of the remote participant is superimposed on a stereoscopic background image.

Furthermore, as to the second difference, the use of a retroreflective screen to receive a projected image is well-known in the field of image projection since it represents the most basic projection arrangement.

A skilled person wanting to obtain a depth impression in a teleconference system as disclosed in D1 and knowing the stereoscopic teleconference system of D2, would immediately realise that the image superimposition principle of D2 should be applied to the system of D1. This skilled person would also, in accordance with circumstances, naturally consider applying the basic principle of a projection on a retroreflective screen. In this manner, he would automatically arrive at the subject-matter of claim 40 on file.

The same remark can be made with respect to the subject-matter of independent apparatus claim 36, all the features of which are included in claim 40.

1.c). The first difference between the subject-matter of claim 41 of the present demand and the disclosure of D1 or D3 is the same as the first difference between the subject-matter of claim 40 of the present demand and the disclosure of D1 or D3 (see section 1.b herein above) and has the same technical effect.

The second difference is the use of means for tracking the eye position of a participant and means for adjusting accordingly the image projection system.

As to the first difference, see section 1.b herein above.

Furthermore, as to the second difference, the use of eye (or head) position tracking means and corresponding projector adjusting means is clearly disclosed in D2, paragraph bridging pages 906 and 907.

A skilled person wanting to obtain a depth impression in a teleconference system as disclosed in D1 and knowing the stereoscopic teleconference system of D2, would immediately realise that the image superimposition principle of D2 as well as its head position adaption should be applied to the system of D1. In this manner, he would automatically arrive at the subject-matter of claim 41 on file.

The same remark can be made with respect to the subject-matter of independent apparatus claim 37, all the features of which are included in claim 40.

1.d). For these reasons, independent apparatus claims 36, 37, 40 & 41 lack inventive step in the sense of Article 33(3) of the PCT vis-à-vis the common knowledge of a skilled person and the teachings of D1 (or D3) and D2.

2). The additional features of dependent claims 38, 39, 42 & 43 are all known from D2. They do therefore not add anything inventive (Article 33(3) PCT) to the subject-matter of the claims to which these dependent claims refer.

3). The closest prior art is represented by D1 (or D3) and D2 is also a relevant document, see details herein above in section 1.

In independent claims 1, 29 and 35, the visual depth-cue means are not the result of a projection as disclosed in the prior art, but are in the form of one or more physical objects. The use of such simple physical depth-cue means allows to obtain, in combination with the projected image of a remote participant, a particularly convincing depth effect and is neither disclosed nor suggested in the available prior art documents.

For these reasons, the independent claims 1, 29 and 35 satisfy the requirements of the PCT with respect to Articles 33 (1 - 4) PCT.
Claims 2 - 28 and 30 - 34 are respectively dependent on claims 1 and 29 and, for this reason, also fulfil these requirements of the PCT.

VII). Certain defects:

a) In order to meet the requirements of Rule 5.1(a)(ii) PCT, the documents D1, D2 & D3 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.

b) The description, in particular pages 2 and 3 (see particularly its last paragraph), should have been brought into conformity with the newly filed claims as required by Rule 5.1(a)(iii) PCT.

c) The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with **all** those features known in combination from the prior art (see document D1) being placed in a preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in a characterising part (Rule 6.3(b)(ii) PCT).

d) Reference signs in parentheses should have been inserted in **all** the claims to increase their intelligibility, Rule 6.2(b) PCT. This applies to both the preamble and characterising portion.

VIII). Certain observations - Clarity:

Although claims 1, 29, 35, 36, 37, 40 & 41 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult to clearly determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

Hence, claims 1, 29, 35, 36, 37, 40 & 41 do not meet the requirements of Article 6 PCT.

In order to overcome this objection, it would appear appropriate to file an amended set of claims defining the relevant subject-matter in terms of **a single** independent apparatus claim followed by dependent claims covering features which are merely optional (Rule 6.4 PCT) or, as an alternative, a single independent communication system claim and a single independent viewing apparatus claim.

CLAIMS

1. A communications system for linking participants at two separate locations, comprising:

first and second locations each provided with at least one real time image capturing device, at least one image projecting device, an observation zone for occupation by a participant at that location and a two-way mirror through which images are viewed, the image capturing device(s) at each location being:

(a) arranged to view any participant occupying the home location observation zone directly or indirectly along a line of sight which passes through the two-way mirror, and

(b) linked to the image projecting device at the other location whereby the captured image is transmitted from the home location to the remote location and projected at the remote location for viewing through the corresponding two-way mirror, and

at least one location being provided with visual depth-cue means located on the opposite side of the two-way mirror to the observation zone, the visual depth-cue means being in the form of one or more physical objects visible through the two-way mirror from the observation zone so that the remotely derived image of a remote participant is seen through the two-way mirror in superimposed relation within a three-dimensional setting afforded by said visual depth-cue means.

2. A system as claimed in Claim 1 in which the object or objects are located at positions forwardly and/or rearwardly of the position of the remotely-derived image.

3. A system as claimed in Claim 1 in which the setting comprises a chair, the back of which is located rearwardly of the position of the remotely-derived image.

4. A system as claimed in Claim 1in which the setting comprises a desk, table, counter, console or the like located forwardly of the position of the remotely-derived image.

5. A system as claimed in Claim 1 in which the setting comprises a lectern located forwardly of the position of the remotely-derived image.

6. A system as claimed in Claim 1 in which the setting comprises a stage.

7. A system as claimed in Claim 6 in which a substantially full height image of the remote participant is projected for viewing against the stage setting.

8. A system as claimed in Claim 7 in which the image is positioned at a location intermediate the forward and rearward extremities of the stage setting.

9. A system as claimed in Claim 6 or 7 in which the stage setting includes a background located rearwardly of the position of the remotely-captured image.

10. A system as claimed in any one of Claims 1 to 9 in which the setting comprises a background located rearwardly of the position of the remotely-derived image, means being provided for producing an image on the background for viewing through the two-way mirror.

11. A system as claimed in any one of Claims 1 to 10 in which the remotely-derived image is projected so that, from the observation zone, it represents the remote participant as a substantially life-size, optionally substantially full height, image in relation to the setting.

12. A system as claimed in any one of Claims 1 to 11 including means for illuminating one or more physical objects constituting said depth-cue means.

13. A system as claimed in any one of Claims 1 to 12 in which the remotely-captured image of a participant comprises a background which is substantially non-visible when viewed through the two-way mirror by a participant at the home location.

14. A system as claimed in any one of Claims 1 to 13 in which the two-way mirror is inclined relative to the line of sight of a participant stationed in the observation zone.

15. A system as claimed in Claim 14 in which the two-way mirror is inclined about a horizontal axis.

16. A system as claimed in Claim 15 in which the remotely-captured image is incident on the two-way mirror from a location below the two-way mirror.

17. A system as claimed in Claim 15 in which the remotely-captured image is incident on the two-way mirror from a location above the two-way mirror.

18. A system as claimed in any one of Claims 1 to 17 including means for adjusting the image-capturing device(s) and/or the participants so that the eye-level of the participant is substantially aligned with the line of sight of the image-capturing device viewing the participant.

19. A system as claimed in any one of Claims 1 to 18 in which the arrangement is such that the remotely-captured images are displayed so as to create a stereoscopic visual effect when viewed from the home location observation zone.

20. A system as claimed in Claim 19 in which the remotely-captured images are processed using light polarising elements to form pairs of images having different polarisations so that a stereoscopic image of the remote participant is seen when viewed at the home location using polarised glasses whereby the images viewed at the home location using a viewer, such as shutter glasses, synchronised with the display of the alternating images.

21. A system as claimed in Claim 19 in which the stereoscopic visual effect is produced by alternating between images of the remote participant(s) captured from different viewpoints.

22. A system as claimed in any one of Claims 1 to 18 in which at least one of said locations is provided with at least two image-capturing devices for viewing the participant(s) at that location from different angles and in which at least one of said locations is provided with at least two image-projecting devices linked to the remote image-capturing devices.

23. A system as claimed in Claim 22 in which the arrangement is such that the remotely-captured images are displayed so as to create a stereoscopic effect when viewed from the home observation zone.

24. A system as claimed in Claim 22 or 23 in which the remotely-captured images are projected onto a retroreflective screen located at the opposite side of the two-way mirror to the observation zone whereby the remotely-captured images are viewed in retroreflection at the observation zone.

25. A system as claimed in any one of Claims 1 to 24 including means for tracking the eye position of a participant in the observation zone and means for adjusting the image-projecting devices in dependence upon such tracked positioning.

26. A system as claimed in Claim 25 in which the tracking means includes an item of headwear to be worn by a participant in use of the system.

27. A system as claimed in Claim 25 in which the tracking means includes camera means for observing the participant and means for analysing the images captured thereby to determine eye positioning.

28. A system as claimed in any one of Claims 1 to 27 including means for correlating actions of a participant at the remote location with one or more physical objects in the home location three dimensional setting so as to produce the impression of interaction of the image observed at the home location with such physical object(s).

29. A communications system for linking participants at two separate locations, comprising:

a first location provided with at least one real time image capturing device and a zone for occupation by one or more participants, the image-capturing device being arranged to view that zone;

a second location provided with at least one image projecting device linked to the image-capturing device at said first location, an observation zone for occupation by one or more participants at the second location, a three dimensional setting with visual depth cue means in the form of one or more physical objects viewable from that observation zone and two-way mirror means interposed between that observation zone and the three dimensional setting,

the arrangement being such that the captured image is transmitted from said first location to the second location and is projected at the second location for viewing of the remote participant(s) through the corresponding two-way mirror means in superimposed relation with the three dimensional setting.

30. A system as claimed in Claim 29 in which a substantially full height image of the remote participant is projected for viewing within the three dimensional setting.

31. A system as claimed in Claim 30 in which the setting comprises a stage and means for displaying a further image constituting a visual depth cue means.

32. A system as claimed in any one of Claims 29 to 31 incorporating the features of any one of Claims 1 to 28.

33. A system as claimed in any one of the preceding claims in which the visual person(s) to person(s) link between locations is supplemented by a computer link between the locations.

34. A system as claimed in any one of the preceding claims in which, in addition to said first and second locations, there is at least one further location so arranged that a person at each location is able to communicate at least visually with a person at at least one, preferably at each, other location.

35. A viewing arrangement for use in a communications system as claimed in any one of Claims 1 to 32, comprising at least one image projecting device capable of being linked to an image-capturing device at a remote location, an observation zone for occupation by one or more participants, a three dimensional setting with visual depth cue means in the form of one or more physical objects viewable from that observation zone

and two-way mirror means interposed between that observation zone and the three dimensional setting, the arrangement being such that a captured image transmitted from said remote location to the image projecting device is projected for viewing of a remote participant(s) through the corresponding two-way mirror means in superimposed relation with the three dimensional setting.

36. A communications system comprising at least one image projecting device capable of being linked to an image-capturing device at a remote location, an observation zone for occupation by one or more participants, a three dimensional setting with visual depth cue means viewable from that observation zone and two-way mirror means interposed between that observation zone and the three dimensional setting, the arrangement being such that the remotely-captured images are projected onto a retroreflective screen located at the opposite side of the two-way mirror to the observation zone whereby the remotely-captured images are viewed in retroreflection at the observation zone.

37. A communications system comprising at least one image projecting device capable of being linked to an image-capturing device at a remote location, an observation zone for occupation by one or more participants, a three dimensional setting with visual depth cue means viewable from that observation zone and two-way mirror means interposed between that observation zone and the three dimensional setting, and means for tracking the eye position of a participant in the observation zone and means for adjusting the image-projecting devices in dependence upon such tracked positioning.

38. A system as claimed in Claim 37 in which the tracking means includes an item of headwear to be worn by a participant in use of the system.

39. A system as claimed in Claim 37 in which the tracking means includes camera means for observing the participant and means for analysing the images captured thereby to determine eye positioning.

40. A communications system for linking participants at two separate locations, comprising:

first and second locations each provided with at least one real time image capturing device, at least one image projecting device, an observation zone for occupation by a participant at that location and a two-way mirror through which images are viewed, the image capturing device(s) at each location being:

(a) arranged to view any participant occupying the home location observation zone directly or indirectly along a line of sight which passes through the two-way mirror, and

(b) linked to the image projecting device at the other location whereby the captured image is transmitted from the home location to the remote location and projected at the remote location for viewing through the corresponding two-way mirror, and

at least one location being provided with visual depth-cue means visible through the two-way mirror from the observation zone so that the remotely derived image of a remote participant is seen through the two-way mirror in superimposed relation within a three-dimensional setting afforded by said visual depth-cue means, and

the arrangement being such that the remotely-captured images are projected onto a retroreflective screen located at the opposite side of the two-way mirror to the observation zone whereby the remotely-captured images are viewed in retroreflection at the observation zone.

41. A communications system for linking participants at two separate locations, comprising:

first and second locations each provided with at least one real time image capturing device, at least one image projecting device, an observation zone for occupation by a participant at that location and a two-way mirror through which images are viewed, the image capturing device(s) at each location being:

(a) arranged to view any participant occupying the home location observation zone directly or indirectly along a line of sight which passes through the two-way mirror, and

(b) linked to the image projecting device at the other location whereby the captured image is transmitted from the home location to the remote location and projected at the remote location for viewing through the corresponding two-way mirror, and

at least one location being provided with visual depth-cue means visible through the two-way mirror from the observation zone so that the remotely derived image of a remote participant is seen through the two-way mirror in superimposed relation within a three-dimensional setting afforded by said visual depth-cue means,

means being provided for tracking the eye position of a participant in the observation zone and means for adjusting the image-projecting devices in dependence upon such tracked positioning.

42. A system as claimed in Claim 41 in which the tracking means includes an item of headwear to be worn by a participant in use of the system.

43. A system as claimed in Claim 41 in which the tracking means includes camera means for observing the participant and means for analysing the images captured thereby to determine eye positioning. the arrangement being such that the remotely-captured images are displayed so as to create a stereoscopic effect when viewed from the home observation zone.

5

CLAIMS

1. A communications system for linking participants at two separate locations, comprising:

first and second locations each provided with at least one real time image capturing device, at least one image projecting device, an observation zone for occupation by a participant at that location and a two-way mirror through which images are viewed, the image capturing device(s) at each location being:

(a) arranged to view any participant occupying the home location observation zone directly or indirectly along a line of sight which passes through the two-way mirror, and

(b) linked to the image projecting device at the other location whereby the captured image is transmitted from the home location to the remote location and projected at the remote location for viewing through the corresponding two-way mirror, and

at least one location being provided with visual depth-cue means visible through the two-way mirror from the observation zone so that the remotely derived image of a remote participant is seen through the two-way mirror in superimposed relation within a three-dimensional setting afforded by said visual depth-cue means.

2. A system as claimed in Claim 1 in which the setting includes one or more physical objects located on the opposite side of the two-way mirror to the observation zone.

3. A system as claimed in Claim 2 in which the object or objects are located at positions forwardly and/or rearwardly of the position of the remotely-derived image.

4. A system as claimed in Claim 2 in which the setting comprises a chair, the back of which is located rearwardly of the position of the remotely-derived image.

5. A system as claimed in Claim 2 in which the setting comprises a desk, table, counter, console or the like located forwardly of the position of the remotely-derived image.

6. A system as claimed in Claim 2 in which the setting comprises a lectern located forwardly of the position of the remotely-derived image.

7. A system as claimed in Claim 2 in which the setting comprises a stage.

8. A system as claimed in Claim 7 in which a substantially full height image of the remote participant is projected for viewing against the stage setting.

9. A system as claimed in Claim 8 in which the image is positioned at a location intermediate the forward and rearward extremities of the stage setting.

10. A system as claimed in Claim 7 or 8 in which the stage setting includes a background located rearwardly of the position of the remotely-captured image.

11. A system as claimed in any one of Claims 1 to 10 in which the setting comprises a background located rearwardly of the position of the remotely-derived

image, means being provided for producing an image on the background for viewing through the two-way mirror.

12. A system as claimed in any one of Claims 1 to 11 in which the remotely-derived image is projected so that, from the observation zone, it represents the remote participant as a substantially life-size, optionally substantially full height, image in relation to the setting.

13. A system as claimed in any one of Claims 1 to 12 including means for illuminating one or more physical objects constituting said depth-cue means.

14. A system as claimed in any one of Claims 1 to 13 in which the remotely-captured image of a participant comprises a background which is substantially non-visible when viewed through the two-way mirror by a participant at the home location.

15. A system as claimed in any one of Claims 1 to 14 in which the two-way mirror is inclined relative to the line of sight of a participant stationed in the observation zone.

16. A system as claimed in Claim 15 in which the two-way mirror is inclined about a horizontal axis.

17. A system as claimed in Claim 16 in which the remotely-captured image is incident on the two-way mirror from a location below the two-way mirror.

18. A system as claimed in Claim 16 in which the remotely-captured image is incident on the two-way mirror from a location above the two-way mirror.

19. A system as claimed in any one of Claims 1 to 18 including means for adjusting the image-capturing device(s) and/or the participants so that the eye-level of the participant is substantially aligned with the line of sight of the image-capturing device viewing the participant.

20. A system as claimed in any one of Claims 1 to 19 in which the arrangement is such that the remotely-captured images are displayed so as to create a stereoscopic visual effect when viewed from the home location observation zone.

21. A system as claimed in Claim 20 in which the remotely-captured images are processed using light polarising elements to form pairs of images having different polarisations so that a stereoscopic image of the remote participant is seen when viewed at the home location using polarised glasses whereby the images viewed at the home location using a viewer, such as shutter glasses, synchronised with the display of the alternating images.

22. A system as claimed in Claim 20 in which the stereoscopic visual effect is produced by alternating between images of the remote participant(s) captured from different viewpoints.

23. A system as claimed in any one of Claims 1 to 19 in which at least one of said locations is provided with at least two image-capturing devices for viewing the participant(s) at that location from different angles and in which at least one of said locations is provided with at least two image-projecting devices linked to the remote image-capturing devices.

24. A system as claimed in Claim 23 in which the arrangement is such that the remotely-captured images are displayed so as to create a stereoscopic effect when viewed from the home observation zone.

25. A system as claimed in Claim 23 or 24 in which the remotely-captured images are projected onto a retroreflective screen located at the opposite side of the two-way mirror to the observation zone whereby the remotely-captured images are viewed in retroreflection at the observation zone.

26. A system as claimed in any one of Claims 1 to 25 including means for tracking the eye position of a participant in the observation zone and means for adjusting the image-projecting devices in dependence upon such tracked positioning.

27. A system as claimed in Claim 26 in which the tracking means includes an item of headwear to be worn by a participant in use of the system.

28. A system as claimed in Claim 26 in which the tracking means includes camera means for observing the participant and means for analysing the images captured thereby to determine eye positioning.

29. A system as claimed in any one of Claims 1 to 28 including means for correlating actions of a participant at the remote location with one or more physical objects in the home location three dimensional setting so as to produce the impression of interaction of the image observed at the home location with such physical object(s).

30. A communications system for linking participants at two separate locations, comprising:

a first location provided with at least one real time image capturing device and a zone for occupation by one or more participants, the image-capturing device being arranged to view that zone;

a second location provided with at least one image projecting device linked to the image-capturing device at said first location, an observation zone for occupation by one or more participants at the second location, a three dimensional setting with visual depth cue means viewable from that observation zone and two-way mirror means interposed between that observation zone and the three dimensional setting, the arrangement being such that the captured image is transmitted from said first location to the second location and is projected at the second location for viewing of the remote participant(s) through the corresponding two-way mirror means in superimposed relation with the three dimensional setting.

31. A system as claimed in Claim 30 in which a substantially full height image of the remote participant is projected for viewing within the three dimensional setting.

32. A system as claimed in Claim 31 in which the setting comprises a stage and means for displaying a further image constituting a visual depth cue means.

33. A system as claimed in any one of Claims 30 to 32 incorporating the features of any one of Claims 2 to 29.

34. A system as claimed in any one of the preceding claims in which the visual person(s) to person(s) link between locations is supplemented by a computer link between the locations.

35. A system as claimed in any one of the preceding claims in which, in addition to said first and second locations, there is at least one further location so arranged that a person at each location is able to communicate at least visually with a person at at least one, preferably at each, other location.

36. A viewing arrangement for use in a communications system as claimed in any one of Claims 1 to 33, comprising at least one image projecting device capable of being linked to an image-capturing device at a remote location, an observation zone for occupation by one or more participants, a three dimensional setting with visual depth cue means viewable from that observation zone and two-way mirror means interposed between that observation zone and the three dimensional setting, the arrangement being such that a captured image transmitted from said remote location to the image projecting device is projected for viewing of a remote participant(s) through the corresponding two-way mirror means in superimposed relation with the three dimensional setting.

37. Any novel feature or combination of features as disclosed hereinbefore.

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference *(if desired) (12 characters maximum)* N00/0403/PCT

Box No. I TITLE OF INVENTION

COMMUNICATIONS SYSTEM

Box No. II APPLICANT

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

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This person is applicant for the purposes of: [X] all designated States [ ] all designated States except the United States of America [ ] the United States of America only [ ] the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

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This person is:

[ ] applicant only

[ ] applicant and inventor

[ ] inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is, country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of: [ ] all designated States [ ] all designated States except the United States of America [ ] the United States of America only [ ] the States indicated in the Supplemental Box

[ ] Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: [X] agent [ ] common representative

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Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) *(mark the applicable check-boxes; at least one must be marked)*:

Regional Patent

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☒ **AU** Australia .....
☒ **AZ** Azerbaijan
☒ **BA** Bosnia and Herzegovina .....
☒ **BB** Barbados
☒ **BG** Bulgaria .....
☒ **BR** Brazil .....
☒ **BY** Belarus .....
☒ **BZ** Belize
☒ **CA** Canada
☒ **CH and LI** Switzerland and Liechtenstein
☒ **CN** China .....
☒ **CR** Costa Rica .....
☒ **CU** Cuba .....
☒ **CZ** Czech Republic .....
☒ **DE** Germany .....
☒ **DK** Denmark .....
☒ **DM** Dominica
☒ **DZ** Algeria .....
☒ **EE** Estonia .....
☒ **ES** Spain .....
☒ **FI** Finland .....
☒ **GB** United Kingdom
☒ **GD** Grenada
☒ **GE** Georgia .....
☒ **GH** Ghana .....
☒ **GM** Gambia
☒ **HR** Croatia .....
☒ **HU** Hungary .....
☒ **ID** Indonesia
☒ **IL** Israel .....
☒ **IN** India .....
☒ **IS** Iceland
☒ **JP** Japan .....
☒ **KE** Kenya .....
☒ **KG** Kyrgyzstan .....
☒ **KP** Democratic People's Republic of Korea .....
☒ **KR** Republic of Korea .....
☒ **KZ** Kazakhstan .....
☒ **LC** Saint Lucia
☒ **LK** Sri Lanka
☒ **LR** Liberia
☒ **LS** Lesotho .....
☒ **LT** Lithuania
☒ **LU** Luxembourg
☒ **LV** Latvia
☒ **MA** Morocco .....
☒ **MD** Republic of Moldova .....
☒ **MG** Madagascar .....
☒ **MK** The former Yugoslav Republic of Macedonia .....
☒ **MN** Mongolia
☒ **MW** Malawi .....
☒ **MX** Mexico .....
☒ **MZ** Mozambique
☒ **NO** Norway
☒ **NZ** New Zealand .....
☒ **PL** Poland .....
☒ **PT** Portugal .....
☒ **RO** Romania
☒ **RU** Russian Federation .....
☒ **SD** Sudan
☒ **SE** Sweden
☒ **SG** Singapore
☒ **SI** Slovenia .....
☒ **SK** Slovakia .....
☒ **SL** Sierra Leone .....
☒ **TJ** Tajikistan .....
☒ **TM** Turkmenistan .....
☒ **TR** Turkey .....
☒ **TT** Trinidad and Tobago .....
☒ **TZ** United Republic of Tanzania
☒ **UA** Ukraine .....
☒ **UG** Uganda .....
☒ **US** United States of America .....
☒ **UZ** Uzbekistan .....
☒ **VN** Viet Nam .....
☒ **YU** Yugoslavia .....
☒ **ZA** South Africa .....
☒ **ZW** Zimbabwe .....

Check-box reserved for designating States which have become party to the PCT after issuance of this sheet:

☐ .....

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. *(Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)*

Box No. VI PRIORITY CLAIM ☐ Further priority claims are indicated in the Supplemental Box.

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is: national application: country	regional application:* regional Office	international application: receiving Office
item (1) 10.08.99 10 August 1999	9918704.9	Great Britain		
item (2) 26.05.00 26 May 2000	0012732.4	Great Britain		
item (3)				

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) *(only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office)* identified above as item(s): 2

** Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.*

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) *(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used)* :
ISA /

Request to use results of earlier search; reference to that search *(if an earlier search has been carried out by or requested from the International Searching Authority)*:
Date *(day/month/year)* Number Country *(or regional Office)*

Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following **number of sheets**:

request	3
description (excluding sequence listing part)	23
claims	7
abstract	1
drawings	10
sequence listing part of description	
Total number of sheets	44

This international application is **accompanied by** the item(s) marked below:

1. ☐ fee calculation sheet
2. ☐ separate signed power of attorney
3. ☐ copy of general power of attorney; reference number, if any:
4. ☐ statement explaining lack of signature
5. ☐ priority document(s) identified in Box No. VI as item(s):
6. ☐ translation of international application into (language):
7. ☐ separate indications concerning deposited microorganism or other biological material
8. ☐ nucleotide and/or amino acid sequence listing in computer readable form
9. ☐ other *(specify)*: 23/77

Figure of the drawings which should accompany the abstract:

Language of filing of the international application: ENGLISH

Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

ARCollingwood

COLLINGWOOD, Anthony Robert - Agent

For receiving Office use only

1. Date of actual receipt of the purported international application:
2. Drawings: ☐ received: ☐ not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:
4. Date of timely receipt of the required corrections under PCT Article 11(2):
5. International Searching Authority (if two or more are competent): ISA /
6. ☐ Transmittal of search copy delayed until search fee is paid.

For International Bureau use only

Date of receipt of the record copy by the International Bureau:

[redacted]ents Form 23/77

Patents Act 1977
Rules 6, 52, 119

The Patent Office

23/77

Request for a certificate of the Comptroller or a certified or uncertified copy from a file or the register

(See the notes on the back of this form)

The Patent Office
Cardiff Road
Newport
South Wales
NP10 8QQ

1. Your reference	N00/0403/PCT
2. Patent application or patent number(s) *(see notes (c) & (d))*	0012732.4
3. Full name of the or of each patent applicant or proprietor *(if known)*	Peter McDuffie White
4. What do you want a copy of? *(see note (f))*	An application as filed
5. How many copies do you need?	One
6. State the type of certificate you want *(see note (g))* and if it is needed to support applications made outside the United Kingdom, list the countries concerned *(see notes (j) & (k))*	Certified with signature and seal. Required in connection with aPCT filing.
7. Name, address and postcode of the or of each person making this request *(see note (b))*	McNeight & Lawrence Regent House, Heaton Lane Stockport, Cheshire SK4 1BS
8. Name, address and postcode of the or of each person certificates or copies should be sent to (if different from that given in part 6 above) *(see note (i))*	Send to the International Unit as a priority document for PCT application.

9.	Signature	Date
	McNeight & Lawrence	21 July 2000

10. Name and daytime telephone number of person to contact in the United Kingdom	A R Collingwood 0161 480 6394

Patents Form 23/77

Patents Act 1977
Rules 6, 52, 119

23/77

Request for a certificate of the Comptroller or a certified or uncertified copy from a file or the register

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1. Your reference

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9918704.9

3. Full name of the or of each patent applicant or proprietor *(if known)*

Peter McDuffie White

4. What do you want a copy of? *(see note (f))*

An application as filed

5. How many copies do you need?

One

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McNeight & Lawrence
Regent House, Heaton Lane
Stockport, Cheshire SK4 1BS

8. Name, address and postcode of the or of each person certificates or copies should be sent to (if different from that given in part 6 above) *(see note (i))*

Send to the International Unit as a priority document for PCT application.

9. Signature

McNeight & Lawrence

Date

21 July 2000

10. Name and daytime telephone number of person to contact in the United Kingdom

A R Collingwood

0161 480 6394

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